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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,634	11/24/2003	Hokan S. Colting	51751/12	1295
27871	7590	05/14/2004	EXAMINER	
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ART UNIT PAPER NUMBER				
3643				
DATE MAILED: 05/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,634	COLTING, HOKAN S.	
	Examiner	Art Unit	
	Robert P. Swiatek	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 November 2003.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-25 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 10-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Campbell (US 5,645,248). The patent to Campbell discloses a lighter-than-air sphere with a propulsion unit 55 utilizing a pusher propeller 56, photovoltaic panels 71, telecommunications equipment, and a camera 43 (see column 6, lines 6-19, of Campbell). The propeller 56 of Campbell is deemed to constitute a boundary layer separation suppression element—similar to applicant's pusher propeller—in that it would shift the airflow separation point rearwardly with respect to the body of the aircraft.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6, 8, 9, 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell. The Campbell LTA sphere includes an internal envelope or compartment 34 as well as an external structure 23 formed of material 29. Communications and surveillance equipment in the form of transmitters, receivers, and cameras can be included with the sphere. Although the

Art Unit: 3643

initial volume of inflation of the Campbell sphere or ballonet 34 is not given, inflating at least one sphere or ballonet to 70% of its sea level volume would have been obvious in order to avoid overpressurization at the working altitude of the sphere. As to claims 3-6, 8, 9, the dimensions and rotation rate of the pusher propeller of Campbell as well as the use of rechargeable batteries with the photovoltaic panels, whereby the panels in essence would replenish the batteries with “fuel,” would have been obvious to one skilled in the art wishing to maximize the propeller’s effect with respect to the flight characteristics of the aircraft and permit sustained operation of the communications and surveillance devices.

Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell. The buoyant sphere of Campbell is provided with a propulsion unit 55 and directional control equipment in the form of an autopilot 95, compass 101, and control surface servos 103, 106 to maintain the sphere at a desired location and altitude. A radio-controlled servomotor 30 permits remote operation of the sphere; a digital camera also can be controlled remotely (see column 5, lines 21-23, and column 6, lines 16-18, of Campbell). As to claim 21, see column 11, lines 60-62, of Campbell. The Campbell device is designed to operate and be maintained at an approximate altitude of 23,000 feet. Inflating the sphere or a component thereof to a sea level volume less than 70% of the internal volume, while not specifically recited in Campbell, would have been obvious to one skilled in the art seeking to avoid damage to the craft due to subsequent expansion of the gas as the sphere ascended.

Claims 22, 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 22, line 1, the phrase “loitering maintaining said aircraft” is unclear.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 8, 9, 20-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-4, 22, 34, 44 of copending Application No. 10/178,345. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2-4, 22 of Application No. 10/178,345 recite a substantially spherical aircraft having buoyancy apparatus to maintain it aloft, propulsion and directional apparatus, and a boundary layer separation suppression element; claim 34 recites a fuel replenishment system. Claim 44 of Application No. 10/178,345 is drawn to a method for operating a buoyant aircraft comprising the steps of providing a substantially spherical aircraft having propulsion and directional control systems, operating it at an altitude in excess of 10,000 feet above sea level, maintaining it in a loitering position, and refueling it while at altitude.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 2-7, 10-19, 24, 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-4, 22, 34, 44 of copending Application No. 10/178,345 in view of Campbell. It would have been obvious to one

Art Unit: 3643

skilled in the art to provide the claimed aircraft of Application No. 10/178,345 with a pusher propeller, solar cell panels, telecommunications equipment, a remote-controlled capability, and a camera, in view of the teaching of Campbell that a propeller allows the aircraft to efficiently maintain its position above the Earth, solar cell panels generate power for operation of electronic components, telecommunications equipment and a camera permit operation of the aircraft as a surveillance platform, and remote-control capability of the aircraft allows operation of the craft by ground controllers.

This is a provisional obviousness-type double patenting rejection.

If a terminal disclaimer is filed and claim 7 rewritten in independent form to include all the limitations of the intervening claims, it will be allowed.

The patents to Eshoo (US 4,262,864) and Ferguson (US 4,366,936) have been cited to provide additional examples of buoyant aircraft.

RPS: 1703/308-2700
10 May 2004

Robert P. Swiatek
ROBERT P. SWIATEK
PRIMARY EXAMINER
ART UNIT 3643